

Amendments to the Specification:

At page 1, line 1, please delete subheading:

~~Description~~

Please insert the following new paragraph after the title:

Cross-Reference to Related Applications

This application is the National Stage of International Application No. PCT/DE2003/001906, filed June 10, 2003, which claims the benefit of German Patent Application Serial No. 10234704.2, filed on July 30, 2002. The contents of both applications are hereby incorporated by reference in their entireties.

At page 1, after the new paragraph "Cross-Reference to", insert a new subheading:

FIELD OF THE INVENTION

At page 1, line 7 after the first paragraph, insert a new subheading:

BACKGROUND OF THE INVENTION

At page 1, line 21, insert a new subheading:

SUMMARY OF THE INVENTION

Please amend the paragraph beginning at page 1, line 22, as follows:

~~{However, a}~~A disadvantage with respect to heat transfer to the coolant is the fact that no microstructured area can be placed directly under the laser bar 12 because of the seal. A region 54 of heat flow is therefore created, as illustrated in Fig. 2.

Please amend the paragraph beginning at page 2, line 6, as follows:

This object is achieved by means of[[the]] a semiconductor device as set forth in ~~Claim 1~~
below. Advantageous improvements of the semiconductor device ~~can be found in dependent~~
~~claims 2 to 15~~ also follow.

Please amend the paragraph beginning at page 5, line 20, as follows:

Further advantages, advantageous embodiments, features and details of the invention will
emerge from ~~the dependent claims and~~ the following description of an embodiment example
with the accompanying drawings.

*At page 5, in the blank space above the paragraph beginning "Only the elements" insert
a new subheading:*

BRIEF DESCRIPTION OF THE DRAWINGS

*At page 6, line 1, in the blank space above the paragraph beginning "The
semiconductor" insert a new subheading:*

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

At page 12, line 18, delete:

~~[[FIG. 1]]~~

Please replace the abstract at page 12 with the following amended abstract:

A semiconductor device comprising a semiconductor component[[(12)], particularly a
power laser diode bar, disposed on a cooling element[[(20)], wherein the cooling element[[
(20)]] contains in its interior a cooling channel[[(26)] for conducting a coolant. The coolant
channel[[(26)] comprises in at least one region[[(32)] microstructures for effective heat
transfer to the coolant. The semiconductor component[[(12)] substantially completely overlaps
the region[[(32)] of the cooling channel[[(26)] comprising the microstructures. Disposed
between the semiconductor component[[(12)] and the cooling element[[(20)] is an

intermediate support[[(16)]] so arranged and configured that it compensates for mechanical stresses between the semiconductor component[[(12)]] and the cooling element[[(20)]] occurring as a result of differing thermal expansions of the semiconductor component[[(12)]] and the cooling element[[(20)]]. The material of the cooling element[[(20)]] particularly preferably has a high modulus of elasticity such that the compensation takes place substantially within the elastic strain regime.